

(v) The service manual and written guidelines required by §§ 160.176-19(c) and 160.176-19(d) of the part and the user's manual required by § 160.176-21 of this part.

(vi) A list of proposed servicing facilities.

(4) The description of quality control procedures required by § 159.005-9 of this chapter to be submitted with the test report may be omitted as long as the manufacturer's planned quality control procedures comply with § 160.176-15 of this part.

(5) The test report must include, in addition to information required by § 159.005-9 of this chapter, a report of inspection of each proposed servicing facility. The report must include the time, date, place, and name of the person doing the inspection and observations that show whether the facility meets §§ 160.176-19(b)(2), 160-176-19(b)(4), and 160.176-19(d) of this part.

(6) The certificate of approval, when issued, is accompanied by a letter to the manufacturer listing the servicing facilities that have been approved. Copies of the letter are also provided for each facility.

(7) An approval will be suspended or terminated under § 159.005-15 of this chapter if the manufacturer fails to maintain approved servicing facilities that meet § 160.176-19 of this part.

(b) *Manuals and guidelines.* The manuals and servicing facility guidelines required by this subpart are reviewed with the application for lifejacket approval. Changes will be required if needed to comply with §§ 160.176-19 and 160.176-21 of this part.

(c) *Approval of servicing facilities.* (1) Approval of servicing facilities initially proposed for use is considered during and as a part of the lifejacket approval process described in paragraph (a) of this section.

(2) Other servicing facilities may subsequently be considered for approval, upon submission of a letter of application to Commandant containing each of the applicable items required of manufacturers and laboratories under § 159.005-5 of this chapter and the following:

(i) A copy of guidelines meeting § 160.176-19(d) of this part, if different

from those originally approved with the lifejacket;

(ii) A list of the sources the servicing facility proposes to use for parts and manuals for the servicing of the make and model of lifejacket applied for; and

(iii) A report of inspection prepared by an independent laboratory which includes the time, date, and place of the inspection, the name of the inspector, and observations that show whether the facility meets §§ 160.176-19(b)(2) through 160.176-19(b)(4) and 160.176-19(d) of this part.

(3) To conduct servicing at a remote or mobile site, the servicing facility must be authorized in its letter of approval to conduct this type of servicing. Approval for servicing at these sites is obtained according to paragraph (c)(2) of this section except that portable or mobile equipment must be available when evaluating the compliance with § 160.176-19(b)(3) of this part.

(4) Each change to equipment, procedure, or qualification and training of personnel of an approved servicing facility must be also approved.

(d) *Waiver of tests.* If a manufacturer requests that any test in this subpart be waived, one of the following must be provided to the Commandant as justification for the waiver:

(1) Acceptable test results on a lifejacket of sufficiently similar design.

(2) Engineering analysis showing that the test is not applicable to the particular design or that by design or construction the lifejacket can not fail the test.

(e) *Alternative requirements.* A lifejacket that does not meet requirements in this subpart may still be approved if the device—

(1) Meets other requirements prescribed by the Commandant in place of or in addition to requirements in this subpart; and

(2) Provides at least the same degree of safety provided by other lifejackets that do comply with this subpart.

[CGD 78-1746, 54 FR 50320, Dec. 5, 1989, as amended by CGD 78-174b, 56 FR 29441, June 27, 1991]

§ 160.176-6 Procedure for approval of design or material revision.

(a) Each change in design, material, or construction must be approved by

the Commandant before being used in lifejacket production.

(b) Determinations of equivalence of design, construction, and materials may only be made by the Commandant.

§ 160.176-7 Independent laboratories.

A list of independent laboratories which have been accepted by the Commandant for conducting or supervising the following tests and inspections required by this subpart, may be obtained from the Commandant:

- (a) Approval tests.
- (b) Production tests and inspections.
- (c) Inspection of approved servicing facilities.
- (d) Testing of materials for the purpose of making the certification required by § 160.176-8(a)(3) of this part.

§ 160.176-8 Materials.

(a) *General*—(1) *Acceptance, certification, and quality.* All components used in the construction of lifejackets must meet the requirements of subpart 164.019 of this chapter.

(2) *Condition of materials.* All materials must be new.

(3) *Temperature range.* Unless otherwise specified in standards incorporated by reference in this section, all materials must be usable in all weather conditions throughout a temperature range of -30°C to $+65^{\circ}\text{C}$ (-22°F to $+150^{\circ}\text{F}$).

(4) *Weathering resistance.* Each non-metallic component which is not suitably covered to shield against ultraviolet exposure must retain at least 40% of its strength after being subjected to 300 hours of sunshine carbon arc weathering as specified by Method 5804.1 of Federal Test Method Standard Number 191A.

(5) *Fungus resistance.* Each non-metallic component must retain at least 90% of its strength after being subjected to the mildew resistance test specified by Method 5762 of Federal Test Method Standard No. 191A when untreated cotton is used as the control specimen. Also, the gas transmission rate of inflation chamber materials must not be increased by more than 10% after being subjected to this test. Materials that are covered when used in the lifejacket may be tested with the covering material.

(6) *Corrosion resistance.* Each metal component must—

(i) Be galvanically compatible with each other metal part in contact with it; and

(ii) Unless it is expendable (such as an inflation medium cartridge), be 410 stainless steel, have salt water and salt air corrosion characteristics equal or superior to 410 stainless steel, or perform its intended function and have no visible pitting or other damage on any surface after 720 hours of salt spray testing according to ASTM B 117.

(7) *Materials not covered.* Materials having no additional specific requirements in this section must be of good quality and suitable for the purpose intended.

(b) *Fabric*—(1) *All fabric.* All fabric must—

(i) Be of a type accepted for use on Type I life preservers approved under subpart 160.002 of this part; or

(ii) Meet the Type V requirements for “Fabrics for Wearable Devices” in UL 1191 except that breaking strength must be at least 400 N (90 lb.) in both directions of greater and lesser thread count.

(2) *Rubber coated fabric.* Rubber coated fabric must be of a copper-inhibiting type.

(c) *Inflation chamber materials*—(1) *All materials.* (i) The average permeability of inflation chamber material, determined according to the procedures specified in § 160.176-13(y)(3) of this part, must not be more than 110% of the permeability of the materials determined in approval testing prescribed in § 160.176-13(y)(3) of this part.

(ii) The average grab breaking strength and tear strength of the material, determined according to the procedures specified in §§ 160.176-13(y)(1) and 160.176-13(y)(2) of this part, must be at least 90% of the grab breaking strength and tear strength determined from testing prescribed in §§ 160.176-13(y)(1) and 160.176-13(y)(2) of this part. No individual sample result for breaking strength or tear strength may be more than 20% below the results obtained in approval testing.

(2) *Fabric covered chambers.* Each material used in the construction of inflation chambers that are covered with